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Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu 1 5 10 15

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 20 25 30

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 35 40 45

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
100 105 110

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115 120 125

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130 135 140

Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 145 150 155 160

Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Phe Met Ala Arg Thr
165 170 175

Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro Arg Lys Gln 180 185 190

Leu Ala Ser Lys Ala Ala Arg Lys Ser Ala Pro Ser Thr Gly Gly Val 195 200 205

Lys Lys Pro His Arg Tyr Lys Pro Gly Thr Val Ala Leu Arg Glu Ile 215 Arg Arg Phe Gln Lys Ser Thr Glu Pro Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp 280 Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys Glu Asn Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln 355 360 Leu Pro Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg 370 Ser His Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly 385 Gly Ile Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His Leu Met Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys 435 440 Tyr Phe Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Phe Lys Lys 455

Gln Gly Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly 465 470 475 480

Tyr Ile Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala 485 490 495

Ile Pro Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr 500 505 510

Ala Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr
515 520 525

Asp Val Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 530 535 540

<210> 16

<211> 541

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 16

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu 1 5 10 15

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 20 25 30

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 35 40 45

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
100 105 110

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115 120 125 Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Phe Met Ala Arg Thr 170 Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro Arg Lys Gln Leu Ala Ser Lys Ala Ala Arg Lys Ser Ala Pro Ser Thr Gly Gly Val 200 Lys Lys Pro His Arg Tyr Lys Pro Gly Thr Val Ala Leu Arg Glu Ile Arg Arg Phe Gln Lys Ser Thr Glu Pro Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp 280 Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly 290 295 Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe 305 Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys Glu Asn Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg

Ser His Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly 385 390 395 400

Gly Ile Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val 405 410 415

Phe Cys Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His 420 425 430

Leu Met Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys 435 440 445

Tyr Phe Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Ala Lys Lys 450 455 460

Gln Gly Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly 465 470 475 480

Tyr Ile Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala 485 490 495

Ile Pro Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr 500 505 510

Ala Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr 515 520 525

Asp Val Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 530 540

<210> 17

<211> 509

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 17

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu
1 5 10 15

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 20 25 30

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 35 40 45

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 120 Ala Thr Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys Arg His Arg Lys Ile 185 Leu Arg Asp Asn Ile Gln Gly Ile Ser Gly Ser Pro Ile Leu Gly Tyr 195 200 Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly 210 220 Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu 230 Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp 245 Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe 275 280 Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu

295

305	GIU	GIÀ	гÀг	пе	310	Pne	Arg	vai	vai	315	ASN	Asp	Asn	Tnr	Lуs 320
Glu	Asn	Met	Met	Val 325	Leu	Thr	Gly	Leu	Lys 330	Asn	Ile	Phe	Gln	Lys 335	Gln
Leu	Pro	Lys	Met 340	Pro	Lys	Glu	Tyr	Ile 345	Ala	Arg	Leu	Val	Tyr 350	Asp	Arg
Ser	His	Leu 355	Ser	Met	Ala	Val	Ile 360	Arg	Lys	Pro	Leu	Thr 365	Val	Val	Gly
Gly	Ile 370	Thr	Tyr	Arg	Pro	Phe 375	Asp	Lys	Arg	Glu	Phe 380	Ala	Glu	Ile	Val
Phe 385	Cys	Ala	Ile	Ser	Ser 390	Thr	Glu	Gln	Val	Arg 395	Gly	Tyr	Gly	Ala	His 400
Leu	Met	Asn	His	Leu 405	Lys	Asp	Tyr	Val	Arg 410	Asn	Thr	Ser	Asn	Ile 415	Lys
Tyr	Phe	Leu	Thr 420	Tyr	Ala	Asp	Asn	Tyr 425	Ala	Ile	Gly	Tyr	Phe 430	Lys	Lys
Gln	Gly	Phe 435	Thr	Lys	Glu	Ile	Thr 440	Leu	Asp	Lys	Ser	Ile 445	Trp	Met	Gly
Tyr	Ile 450	Lys	Asp	Tyr	Glu	Gly 455	Gly	Thr	Leu	Met	Gln 460	Cys	Ser	Met	Ala
Ile 465	Pro	Gly	Gly	Gly	Arg 470	Ile	Phe	Tyr	Pro	Tyr 475	Asp	Val	Pro	Asp	Tyr 480
Ala	Gly	Tyr	Pro	Tyr 485	Asp	Val	Pro	Asp	Tyr 490	Ala	Gly	Ser	Tyr	Pro 495	Tyr
Asp	Val	Pro	Asp 500	Tyr	Ala	Ala	Gln	Cys 505	Gly	Arg	Ser	Ser			

- <210> 18
- <211> 509
- <212> PRT
- <213> Artificial Sequence
- <220>
- <223> Synthetic
- <400> 18
- Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu 1 5 10 15
- Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 20 25 30
- Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 35 40 45
- Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60
- Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80
- Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95
- Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
 100 105 110
- Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser
- Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130 135 140
- Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 145 150 155 160
- Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Ser Gly Arg Gly Lys 165 170 175
- Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys Arg His Arg Lys Ile 180 185 190
- Leu Arg Asp Asn Ile Gln Gly Ile Ser Gly Ser Pro Ile Leu Gly Tyr 195 200 205

Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly 215 Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp 245 Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe 280 Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys Glu Asn Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly 355 360 Gly Ile Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val 370 375 Phe Cys Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His 385 390 Leu Met Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys 405 Tyr Phe Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Ala Lys Lys Gln Gly Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly 435 440 Tyr Ile Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Ser Met Ala

Ile Pro Gly Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr

Ala Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr

Asp Val Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser

<210> 19 <211> 541 <212> PRT <213> Artificial Sequence

<220>

<223> Synthetic

<400> 19

.Met Lys Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala 100

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130

Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro

Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Phe Met Ala Arg Thr 165 170 Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro Arg Lys Gln Leu Ala Ser Lys Ala Ala Arg Lys Ser Ala Pro Ser Thr Gly Gly Val Lys Lys Pro His Arg Tyr Lys Pro Gly Thr Val Ala Leu Arg Glu Ile Arg Arg Phe Gln Lys Ser Thr Glu Pro Gly Ser Pro Ile Leu Gly Tyr 225 230 235 Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe 305 310 315 Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu 325 Asn Glu Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys 340 Glu Asn Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln 355 Leu Pro Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly 385 390 395 Gly Ile Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val 405

Phe Cys Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His

Leu Met Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys

Tyr Phe Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Phe Lys Lys

Gln Gly Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly

Tyr Ile Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala 485

Ile Pro Gly Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr 505

Ala Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr

Asp Val Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 530 535

<210> 20

<211> 541 <212> PRT <213> Artificial Sequence

<220>

<223> Synthetic

<400> 20

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 90 Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 120 Ala Thr Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 135 Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 150 155 Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Phe Met Ala Arg Thr Lys Gln Thr Ala Arg Lys Ser Thr Gly Gly Lys Ala Pro Arg Lys Gln Leu Ala Ser Lys Ala Ala Arg Lys Ser Ala Pro Ser Thr Gly Gly Val Lys Lys Pro His Arg Tyr Lys Pro Gly Thr Val Ala Leu Arg Glu Ile Arg Arg Phe Gln Lys Ser Thr Glu Pro Gly Ser Pro Ile Leu Gly Tyr 225 230 235 Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly 245 Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu 260 Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp 275 Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe 305 310 315 Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu 325

Asn	Glu	Gly	Lys 340	Ile	Glu	Phe	Arg	Val 345	Val	Asn	Asn	Asp	Asn 350	Thr	Lys
Glu	Asn	Met 355	Met	Val	Leu	Thr	Gly 360	Leu	Lys	Asn	Ile	Phe 365	Gln	Lys	Glr
Leu	Pro 370	Lys	Met	Pro	Lys	Glu 375	Tyr	Ile	Ala	Arg	Leu 380	Val	Tyr	Asp	Arg
Ser 385	His	Leu	Ser	Met	Ala 390	Val	Ile	Arg	Lys	Pro 395	Leu	Thr	Val	Val	Gly 400
Gly	Ile	Thr	Tyr	Arg 405	Pro	Phe	Asp	Lys	Arg 410	Glu	Phe	Ala	Glu	Ile 415	Val
Phe	Cys	Ala	Ile 420	Ser	Ser	Thr	Glu	Gln 425	Val	Arg	Gly	Tyr	Gly 430	Ala	His
Leu	Met	Asn 435	His	Leu	Lys	Asp	Tyr 440	Val	Arg	Asn	Thr	Ser 445	Asn	Ile	Lys
Tyr	Phe 450	Leu	Thr	Tyr	Ala	Asp 455	Asn	Tyr	Ala	Ile	Gly 460	Tyr	Ala	Lys	Lys
Gln 465	Gly	Phe	Thr	Lys	Glu 470	Ile	Thr	Leu	Asp	Lys 475	Ser	Ile	Trp	Met	Gly 480
Tyr	Ile	Lys	Asp	Tyr 485	Glu	Gly	Gly	Thr	Leu 490	Met	Gln	Cys	Asn	Met 495	Ala
Ile	Pro	Gly	Gly 500	Gly	Arg	Ile	Phe	Tyr 505	Pro	Tyr	Asp	Val	Pro 510	Asp	Tyr
Ala	Gly	Tyr 515	Pro	Tyr	Asp	Val	Pro 520	Asp	Tyr	Ala	Gly	Ser 525	Tyr	Pro	Tyr
Asp	Val 530	Pro	Asp	Tyr	Ala	Ala 535	Gln	Cys	Gly	Arg	Ser 540	Ser			

<210> 21

<211> 509

<212> PRT <213> Artificial Sequence

<220>

<223> Synthetic

<400> 21

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115 120

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130

Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 145 150

Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Ser Gly Arg Gly Lys

Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys Arg His Arg Lys Ile

Leu Arg Asp Asn Ile Gln Gly Ile Ser Gly Ser Pro Ile Leu Gly Tyr 195 200

Trp	Lys 210	Gly	Arg	Arg	Asp	His 215	Pro	Pro	Lys	Ser	Asp 220	Leu	Ile	Glu	Gly
Arg 225	Gly	Asp	Pro	Glu	Val 230	Lys	Arg	Val	Lys	Leu 235	Glu	Asn	Asn	Val	Glu 240
Glu	Ile	Gln	Pro	Glu 245	Gln	Ala	Glu	Thr	Asn 250	Lys	Gln	Glu	Gly	Thr 255	Asp
Lys	Glu	Asn	Lys 260	Gly	Lys	Phe	Glu	Lys 265	Glu	Thr	Glu	Arg	Ile 270	Gly	Gly
Ser	Glu	Val 275	Val	Thr	Asp	Val	Glu 280	Lys	Gly	Ile	Val	Lys 285	Phe	Glų	Phe
Asp	Gly 290	Val	Glu	Tyr	Thr	Phe 295	Lys	Glu	Arg	Pro	Ser 300	Val	Val	Glu	Glu
Asn 305	Glu	Gly	Lys	Ile	Glu 310	Phe	Arg	Val	Val	Asn 315	Asn	Asp	Asn	Thr	Lys 320
Glu	Asn	Met	Met	Val 325	Leu	Thr	Gly	Leu	Lys 330	Asn	Ile	Phe	Gln	Lys 335	Gln
Leu	Pro	Lys	Met 340	Pro	Lys	Glu	Tyr	Ile 345	Ala	Arg	Leu	Val	Tyr 350	Asp	Arg
Ser	His	Leu 355	Ser	Met	Ala	Val	Ile 360	Arg	Lys	Pro	Leu	Thr 365	Val	Val	Gly
Gly	Ile 370	Thr	Tyr	Arg	Pro	Phe 375	Asp	Lys	Arg	Glu	Phe 380	Ala	Glu	Ile	Val
Phe 385	Cys	Ala	Ile	Ser	Ser 390	Thr	Glu	Gln	Val	Arg 395	Gly	Tyr	Gly	Ala	His 400
Leu	Met	Asn	His	Leu 405	Lys	Asp	Tyr	Val	Arg 410	Asn	Thr	Ser	Asn	Ile 415	Lys
Tyr	Phe	Leu	Thr 420	Tyr	Ala	Asp	Asn	Tyr 425	Ala	Ile	Gly	Tyr	Phe 430	Lys	Lys
Gln	Gly	Phe 435	Thr	Lys	Glu	Ile	Thr 440	Leu	Asp	Lys	Ser	Ile 445	Trp	Met	Gly
Tyr	Ile	Lys	Asp	Tyr	Glu	Gly	Gly	Thr	Leu	Met	Gln	Cys	Ser	Met	Ala

Ile Pro Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr

Ala Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr

Asp Val Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser

<210> 22 <211> 509 <212> PRT <213> Artificial Sequence

<220>

<223> Synthetic

<400> 22

Met Lys Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile ,

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala 100

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu

Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 150 155

Lys Lys Glu Ile Glu Phe Gln Leu Thr Thr Met Ser Gly Arg Gly Lys Gly Gly Lys Gly Leu Gly Lys Gly Gly Ala Lys Arg His Arg Lys Ile Leu Arg Asp Asn Ile Gln Gly Ile Ser Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu 230 Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys 305 310 Glu Asn Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln 330 Leu Pro Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg 340 Ser His Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly 355 360 Gly Ile Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His 385 390 Leu Met Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys

Tyr Phe Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Ala Lys Lys

Gln Gly Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly

Tyr Ile Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Ser Met Ala

Ile Pro Gly Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr

Ala Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr 485 490

Asp Val Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser

<210> 23 <211> 475 <212> PRT <213> Artificial Sequence

<220>

<223> Synthetic

<400> 23

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala 100 105 110

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115 120 Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro Lys Lys Glu Ile Glu Phe Gln Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly 180 185 Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp Lys Glu Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe Asp Gly Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu 260 265 Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys Glu Asn 275 Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro 290 Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His 305 310 Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly Gly Ile 325 Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys 340 345 Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His Leu Met

Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys Tyr Phe 370 380

Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Phe Lys Lys Gln Gly 385 390 395

Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly Tyr Ile 405 410 415

Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala Ile Pro 420 425 430

Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly
435 440 445

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr Asp Val 450 455 460

Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 465 470 475

<210> 24

<211> 475

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 24

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu 1 5 10 15

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 20 25 30

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 35 40 45

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala 100 Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 135 Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro Lys Lys Glu Ile Glu Phe Gln Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp Lys Glu 215 Asn Lys Gly Lys Phe Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val Glu Lys Gly Ile Val Lys Phe Glu Phe Asp Gly 245 Val Glu Tyr Thr Phe Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu 260 265 Gly Lys Ile Glu Phe Arg Val Val Asn Asn Asp Asn Thr Lys Glu Asn 275 280 Met Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro 290 295 Lys Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His Leu Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly Gly Ile Thr Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys

345

340

Ala Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His Leu Met

Asn His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys Tyr Phe 375

Leu Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Ala Lys Lys Gln Gly

Phe Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly Tyr Ile

Lys Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala Ile Pro 420 425

Gly Gly Gry Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr Asp Val

Pro Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 470

<210> 25 <211> 486 <212> PRT <213> Artificial Sequence

<220>

<223> Synthetic

<400> 25

Met Lys Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 75

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 120 Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 135 Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 150 155 Lys Lys Glu Ile Glu Phe Gln Gly Thr Met His Glu Leu Pro Arg Leu Glu Pro Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala Glu Thr Asn Lys Gln Glu Gly Thr Asp Lys Glu Asn Lys Gly Lys Phe 225 230 235 Glu Lys Glu Thr Glu Arg Ile Gly Gly Ser Glu Val Val Thr Asp Val 255 Glu Lys Gly Ile Val Lys Phe Glu Phe Asp Gly Val Glu Tyr Thr Phe 260 Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu Gly Lys Ile Glu Phe 275 280 Arg Val Val Asn Asn Asp Asn Thr Lys Glu Asn Met Met Val Leu Thr 295 Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro Lys Met Pro Lys Glu 305 310 Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His Leu Ser Met Ala Val 325

Ile Arg Lys Pro Leu Thr Val Val Gly Gly Ile Thr Tyr Arg Pro Phe

Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys Ala Ile Ser Ser Thr

Glu Gln Val Arg Gly Tyr Gly Ala His Leu Met Asn His Leu Lys Asp

Tyr Val Arg Asn Thr Ser Asn Ile Lys Tyr Phe Leu Thr Tyr Ala Asp

Asn Tyr Ala Ile Gly Tyr Phe Lys Lys Gln Gly Phe Thr Lys Glu Ile 405

Thr Leu Asp Lys Ser Ile Trp Met Gly Tyr Ile Lys Asp Tyr Glu Gly 420

Gly Thr Leu Met Gln Cys Asn Met Ala Ile Pro Gly Gly Gly Arg Ile 435 440

Phe Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Tyr Pro Tyr Asp Val 455

Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ala

Gln Cys Gly Arg Ser Ser 485

<210> 26

<211> 486 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 26

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 25

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 40

- Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60
- Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80
- Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95
- Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
- Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser
- Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130 135 140
- Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 145 150 155 160
- Lys Lys Glu Ile Glu Phe Gln Gly Thr Met His Glu Leu Pro Arg Leu 165 170 175
- Glu Pro Gly Ser Pro Ile Leu Gly Tyr Trp Lys Gly Arg Arg Asp His 180 185 190
- Pro Pro Lys Ser Asp Leu Ile Glu Gly Arg Gly Asp Pro Glu Val Lys
 195 200 205
- Arg Val Lys Leu Glu Asn Asn Val Glu Glu Ile Gln Pro Glu Gln Ala 210 215 220
- Glu Thr Asn Lys Gln Glu Gly Thr Asp Lys Glu Asn Lys Gly Lys Phe 225 230 235 240
- Glu Lys Gly Ile Val Lys Phe Glu Phe Asp Gly Val Glu Tyr Thr Phe 260 265 270
- Lys Glu Arg Pro Ser Val Val Glu Glu Asn Glu Gly Lys Ile Glu Phe 275 280 285
- Arg Val Val Asn Asn Asn Asn Thr Lys Glu Asn Met Met Val Leu Thr 290 295 300

Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro Lys Met Pro Lys Glu 305 310 315 320

Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His Leu Ser Met Ala Val 325 330 335

Ile Arg Lys Pro Leu Thr Val Val Gly Gly Ile Thr Tyr Arg Pro Phe 340 345 350

Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys Ala Ile Ser Ser Thr 355 360 365

Glu Gln Val Arg Gly Tyr Gly Ala His Leu Met Asn His Leu Lys Asp 370 375 380

Tyr Val Arg Asn Thr Ser Asn Ile Lys Tyr Phe Leu Thr Tyr Ala Asp 385 390 395 400

Asn Tyr Ala Ile Gly Tyr Ala Lys Lys Gln Gly Phe Thr Lys Glu Ile 405 410 415

Thr Leu Asp Lys Ser Ile Trp Met Gly Tyr Ile Lys Asp Tyr Glu Gly 420 425 430

Gly Thr Leu Met Gln Cys Asn Met Ala Ile Pro Gly Gly Gly Arg Ile 435 440 445

Phe Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Tyr Pro Tyr Asp Val 450 455 460

Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ala 465 470 475 480

Gln Cys Gly Arg Ser Ser 485

<210> 27

<211> 570

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 27

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu 1 5 10 15

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu 20 25 30

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro 35 40 45

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
100 105 110

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130 140

Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 145 150 155 160

Lys Lys Glu Ile Glu Phe Gln Leu Pro Gly Ser Thr Lys Arg Ala Leu 165 170 175

Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys Pro Leu Asp 180 185 190

Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu Arg Phe Glu Met 195 200 205

Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp Ala Gln Ala Gly 210 215 220

Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys 225 230 235 240

Lys	Gly	Gln	Ser	Thr 245	Ser	Arg	His	Lys	Lys 250	Leu	Met	Phe	Lys	Thr 255	Glu
Gly	Pro	Asp	Ser 260	Asp	Pro	Gly	Ser	Pro 265	Ile	Leu	Gly	Tyr	Trp 270	Lys	Gly
Arg	Arg	Asp 275	His	Pro	Pro	Lys	Ser 280	Asp	Leu	Ile	Glu	Gly 285	Arg	Gly	Asp
Pro	Glu 290	Val	Lys	Arg	Val	Lys 295	Leu	Glu	Asn	Asn	Val 300	Glu	Glu	Ile	Gln
Pro 305	Glu	Gln	Ala	Glu	Thr 310	Asn	Lys	Gln	Glu	Gly 315	Thr	Asp	Lys	Glu	Asn 320
Lys	Gly	Lys	Phe	Glu 325	Lys	Glu	Thr	Glu	Arg 330	Ile	Gly	Gly	Ser	Glu 335	Val
Val	Thr	Asp	Val 340	Glu	Lys	Gly	Ile	Val 345	Lys	Phe	Glu	Phe	Asp 350	Gly	Val
Glu	Tyr	Thr 355	Phe	Lys	Glu	Arg	Pro 360	Ser	Val	Val	Glu	Glu 365	Asn	Glu	Gly
Lys	Ile 370	Glu	Phe	Arg	Val	Val 375	Asn	Asn	Asp	Asn	Thr 380	Lys	Glu	Asn	Met
Met 385	Val	Leu	Thr	Gly	Leu 390	Lys	Asn	Ile	Phe	Gln 395	Lys	Gln	Leu	Pro	Lys 400
Met	Pro	Lys	Glu	Tyr 405	Ile	Ala	Arg	Leu	Val 410	Tyr	Asp	Arg	Ser	His 415	Leu
Ser	Met	Ala	Val 420	Ile	Arg	Lys	Pro	Leu 425	Thr	Val	Val	Gly	Gly 430	Ile	Thr
Tyr	Arg	Pro 435	Phe	Asp	Lys	Arg	Glu 440	Phe	Ala	Glu	Ile	Val 445	Phe	Cys	Ala
Ile	Ser 450	Ser	Thr	Glu	Gln	Val 455	Arg	Gly	Tyr	Gly	Ala 460	His	Leu	Met	Asn
His 465	Leu	Lys	Asp	Tyr	Val 470	Arg	Asn	Thr	Ser	Asn 475	Ile	Lys	Tyr	Phe	Leu 480
Thr	Tyr	Ala	Asp	Asn	Tyr	Ala	Ile	Gly	Tyr	Phe	Lys	Lys	Gln	Gly	Phe

Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly Tyr Ile Lys

Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala Ile Pro Gly

Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Tyr

Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr Asp Val Pro

Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 565

<210> 28

<211> 570 <212> PRT <213> Artificial Sequence

<220>

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<400> 28

Met Lys Leu Leu Ser Ser Ile Glu Gln Ala Cys Asp Ile Cys Arg Leu

Lys Lys Leu Lys Cys Ser Lys Glu Lys Pro Lys Cys Ala Lys Cys Leu

Lys Asn Asn Trp Glu Cys Arg Tyr Ser Pro Lys Thr Lys Arg Ser Pro

Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile

Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala 100 105

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115

Ala	Thr 130	Ser	Ser	Ser	Glu	Glu 135	Ser	Ser	Asn	Lys	Gly 140	Gln	Arg	Gln	Leu
Thr 145	Val	Ser	Asn	Tyr	Leu 150	Phe	Asp	Asp	Glu	Asp 155	Thr	Pro	Pro	Asn	Pro 160
Lys	Lys	Glu	Ile	Glu 165	Phe	Gln	Leu	Pro	Gly 170	Ser	Thr	Lys	Arg	Ala 175	Leu
Pro	Asn	Asn	Thr 180	Ser	Ser	Ser	Pro	Gln 185	Pro	Lys	Lys	Lys	Pro 190	Leu	Asp
Gly	Glu	Tyr 195	Phe	Thr	Leu	Gln	Ile 200	Arg	Gly	Arg	Glu	Arg 205	Phe	Glu	Met
Phe	Arg 210	Glu	Leu	Asn	Glu	Ala 215	Leu	Glu	Leu	Lys	Asp 220	Ala	Gln	Ala	Gly
Lys 225	Glu	Pro	Gly	Gly	Ser 230	Arg	Ala	His	Ser	Ser 235	His	Leu	Lys	Ser	Lys 240
Lys	Gly	Gln	Ser	Thr 245	Ser	Arg	His	Lys	Lys 250	Leu	Met	Phe	Lys	Thr 255	Glu
Gly	Pro	Asp	Ser 260	Asp	Pro	Gly	Ser	Pro 265	Ile	Leu	Gly [']	Tyr	Trp 270	Lys	Gly
Arg	Arg	Asp 275	His	Pro	Pro	Lys	Ser 280	Asp	Leu	Ile	Glu	Gly 285	Arg	Gly	Asp
Pro	Glu 290	Val	Lys	Arg	Val	Lys 295	Leu	Glu	Asn	Asn	Val 300	Glu	Glu	Ile	Gln
Pro 305	Glu	Gln	Ala	Glu	Thr 310	Asn	Lys	Gln	Glu	Gly 315	Thr	Asp	Lys	Glu	Asn 320
Lys	Gly	Lys	Phe	Glu 325	Lys	Glu	Thr	Glu	Arg 330	Ile	Gly	Gly	Ser	Glu 335	Val
Val	Thr	Asp	Val 340	Glu	Lys	Gly	Ile	Val 345	Lys	Phe	Glu	Phe	Asp 350	Gly	Val
Glu	Tyr	Thr 355	Phe	Lys	Glu	Arg	Pro 360	Ser	Val	Val	Glu	Glu 365	Asn	Glu	Gly
Lys	Ile 370	Glu	Phe	Arg	Val	Val 375	Asn	Asn	Asp	Asn	Thr 380	Lys	Glu	Asn	Met

Met Val Leu Thr Gly Leu Lys Asn Ile Phe Gln Lys Gln Leu Pro Lys 385 390 395 400

Met Pro Lys Glu Tyr Ile Ala Arg Leu Val Tyr Asp Arg Ser His Leu 405 410 415

Ser Met Ala Val Ile Arg Lys Pro Leu Thr Val Val Gly Gly Ile Thr 420 425 430

Tyr Arg Pro Phe Asp Lys Arg Glu Phe Ala Glu Ile Val Phe Cys Ala 435 440 445

Ile Ser Ser Thr Glu Gln Val Arg Gly Tyr Gly Ala His Leu Met Asn 450 455 460

His Leu Lys Asp Tyr Val Arg Asn Thr Ser Asn Ile Lys Tyr Phe Leu 465 470 475 480

Thr Tyr Ala Asp Asn Tyr Ala Ile Gly Tyr Ala Lys Lys Gln Gly Phe
485
490
495

Thr Lys Glu Ile Thr Leu Asp Lys Ser Ile Trp Met Gly Tyr Ile Lys 500 505 510

Asp Tyr Glu Gly Gly Thr Leu Met Gln Cys Asn Met Ala Ile Pro Gly 515 520 525

Gly Gly Arg Ile Phe Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Tyr 530 540

Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Tyr Pro Tyr Asp Val Pro 545 550 555 560

Asp Tyr Ala Ala Gln Cys Gly Arg Ser Ser 565 570

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<211> 8708

<212> DNA

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<223> Synthetic

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Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60

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Leu Lys Met Asp Ser Leu Gln Asp Ile Lys Ala Leu Leu Thr Gly Leu 85 90 95

Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala 100 105 110

Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115 120 125

Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130 135 140

Thr Val Ser Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro 145 150 155 160

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Leu Thr Gly Ala Pro Pro Phe Glu Glu Glu Met Lys Asp Thr Thr Tyr 565 570 575

Lys Arg Ile Ala Ala Leu Asp Ile Lys Met Pro Ser Asn Ile Ser Gln 580 585 590

Asp Ala Gln Asp Leu Ile Leu Lys Leu Leu Lys Tyr Asp Pro Lys Asp 595 600 605

Arg Met Arg Leu Gly Asp Val Lys Met His Pro Trp Ile Leu Arg Asn 610 620

Lys Pro Phe Trp Glu Asn Lys Arg Leu Glu Leu Met Ala Ile Pro Gly 625 630 635 640

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Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60

Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80

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Ala	Gln 530	Cys	Gly	Arg	Ser	Ser 535	Asn	Trp	Ile	Pro	Arg 540	Tyr	Arg	Arg	Pro
Ala 545	Glu	Ile	Tyr	Glu	Ser 550	Ile	Leu	Lys	Asn	Pro 555	Ala	Ser	Ser	Leu	Gln 560
Leu	Cys	Ile	Val	His	His	Leu	Asn	Phe	Phe		Leu	Tyr	Ile	Val	Leu

Pro Ser Phe Met Leu Tyr Ser Ser Lys Phe Gln Ser Trp Pro Cys Asn 580 585 590

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Asp Leu Asn Ser 610

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<212> DNA

<213> Artificial Sequence

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<223> Synthetic

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- Leu Thr Arg Ala His Leu Thr Glu Val Glu Ser Arg Leu Glu Arg Leu 50 55 60
- Glu Gln Leu Phe Leu Leu Ile Phe Pro Arg Glu Asp Leu Asp Met Ile 65 70 75 80
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- Phe Val Gln Asp Asn Val Asn Lys Asp Ala Val Thr Asp Arg Leu Ala
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- Ser Val Glu Thr Asp Met Pro Leu Thr Leu Arg Gln His Arg Ile Ser 115 120 125
- Ala Thr Ser Ser Ser Glu Glu Ser Ser Asn Lys Gly Gln Arg Gln Leu 130 135 140
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